termine fate at nesting areas found during random sampling efforts, at historically occupied nesting areas, and at nesting areas found opportunistically by our study team. In this paper, we compare detection rates for the four sampling methods used for relative abundance assessments, discuss potential biases in assessing nesting success, and discuss factors affecting raptor monitoring efforts in a desert area where nesting densities tend to be low.

ABUNDANCE AND DIET OF CHILEAN SPOTTED OWLS IN NEW AND OLD-GROWTH FORESTS

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We report the first quantitative information on the abundance of Chilean spotted owls (*Strix rufipes*) in six new (DBH 10–50 cm, canopy cover 50–75%, 80–200-yr-old) and five old-growth (DBH >50 cm, canopy cover >75%, >200-yr-old) rainforests of southern Chile. Over 37 nights within a year we surveyed 37 linear kilometers of new and 49 km of old-growth forests, detecting by calls the presence of four and 11 spotted owl pairs (0.11 and 0.22 pairs/km), respectively. This difference was marginally significant at $P = 0.08$. Pooling all data and applying a stepwise regression with five supposedly independent but highly correlated variables, canopy cover accounted for 68% of the variance in owl abundance using a maximum improvement procedure (reduction in residual variance). Mean DBH and snags/ha accounted for only 4% of the unexplained variance. Elevation and age accounted for very little of the residual variance. When removing canopy cover from the stepwise regression, mean DBH accounted for 34% of the variance in owl abundance; adding snag/ha improved it negligibly, and age explained <8% of the residual variance. We also collected 161 pellets over 4 yr in two patches of old-growth forest, and identified 376 prey items. Insects, amphibians, and birds accounted for 3 3, 0.5, and 1.5% of the prey by numbers, and mammals for the remainder. Among the latter, an arboreal mouse (*Irenomys tarsalis* = 42 g) and an arboreal opossum (*Dromiciops australis* = 34 g), together with a scansorial mouse (*Oryzomys longicaudatus* = 26 g), accounted for >72% of the total prey consumed.

CHANGES IN GOLDEN EAGLE REPRODUCTIVE SUCCESS IN DENALI NATIONAL PARK, ALASKA, 1988–94

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Since 1988 I have studied the reproductive success of golden eagles (*Aquila chrysaetos*) in a 2500 km^2 study area in Denali National Park, Alaska. Nesting territory occupancy, the percentage of territorial pairs nesting, nesting success and productivity were measured at ≥60 nesting territories each year. Data were collected using two systematic aerial surveys each year. The first annual survey was conducted during incubation in late April and early May to document nesting territory occupancy and nesting attempts. A territory was defined as occupied if evidence of a territorial pair was observed during the first annual survey. A pair was considered to be nesting if incubating adults or eggs were observed in a nest during the first annual survey. The second annual survey was conducted in the late nestling stage in late July, when most nestlings had reached ≥80% of their fledging age, to document nesting success and productivity. Nesting success was defined as the percentage of territorial pairs that successfully raised ≥ one fledgling and productivity was defined as the number of fledglings raised per occupied nesting territory. Nesting territory occupancy remained relatively stable (range: 65–87%) among years; however, between 1989 and 1994, the percentage of territorial pairs nesting decreased from 88% to 33%. Over the same time period, nesting success decreased from 71–15% and productivity decreased from 1.22–0.17 fledged young per occupied nesting territory. Decreases in the percentage of pairs nesting, nesting success and productivity coincided with observed decreases in the number of snowshoe hare (*Lepus americanus*) and willow ptarmigan (*Lagopus lagopus*) in the study area among years from 1989–94. I suggest that food supply, particularly prior to laying, has a strong influence on whether golden eagles lay eggs. Furthermore, I suggest that food supply after laying influences nesting success and productivity.

OPPORTUNISTIC RESPONSE BY CAPTIVE NORTHERN HAWK-OWLS (*SURNIA ULULA*) TO OVERHEAD CORRIDOR ROUTES TO OTHER ENCLOSURES, FOR PURPOSES OF SOCIAL ENCOUNTERS

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The Owl Foundation is a behavioral observation center, affording permanently damaged, wild, native owls the opportunity to make choices of territories and potential mates within extended cage complexes. Many observations are through video monitoring devices. Of 54 compounds covering 1.6 ha, seven, on 0.2 ha of forested slope, are designated for the northern hawk owl (*Surnia ulula*), a species seldom studied in North America. Some 15 yr of continuous observation suggest that this nomadic species quickly exploits any new opportunity for investigation. Ten individuals, evenly divided by sex, inhabit these seven enclosures totalling 1160 m^2, with six connecting overhead corridors from 1.5–6 m in length. Gates in corridors are opened by March, allowing travel by all residents to any part of the seven-cage complex. Both sexes seize this opportunity to explore vocally advertised assets, although females more regularly return to familiar territories, often followed by males. Others may solicit males from 'home'